



UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **IDEI, et al.**

Group Art Unit: 1774

Serial No.: 09/508,617

Examiner: **Lawrence D. Ferguson**

Filed: **March 14, 2000**

P.T.O. Confirmation No.: 8477

For: **PAPER FOR INK JET AND ELECTROPHOTOGRAPHIC RECORDING**

SUBMISSION OF APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 12, 2007

Sir:

Submitted herewith is an Appeal Brief in the above-identified U.S. patent application.

Also enclosed is a check in the amount of **\$500.00** to cover the cost of filing this Appeal Brief. In the event that any additional fees are due with respect to this paper, please charge Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
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Enclosures: Appeal Brief; and check for \$500.00



THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANTS

Ex parte Koji IDEI et al.

PAPER FOR INK JET AND ELECTROPHOTOGRAPHIC RECORDING

Serial Number: 09/508,617

Filed: March 14, 2000

Group Art Unit: 1774

Examiner: Lawrence D. Ferguson

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Date: January 12, 2007
Atty. Docket No. 000225



**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appeal No:

In re the Application of: **IDEI, Koji, et al.**

Group Art Unit: **1774**

Serial No.: **09/508,617**

Examiner: **Lawrence D. Ferguson**

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APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: January 12, 2007

Sir:

This is an appeal from the Office Action dated September 8, 2006 in which claims 1 and 3-7 were finally rejected.

A Notice of Appeal was timely filed on December 8, 2006.

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U.S. Patent Application Serial No. 09/508,617

I. REAL PARTY IN INTEREST

The real party in interest is the assignee of the subject application, which is:

MITSUBISHI PAPER MILLS LIMITED
4-2, Marunouchi-3-chome
Chiyoda-ku
Tokyo, Japan

U.S. Patent Application Serial No. 09/508,617

II. RELATED APPEALS AND INTERFERENCES

Appellants know of no other appeals or interference proceedings related to the present appeal.

III. STATUS OF CLAIMS

Claim 1 on appeal is rejected.

Claim 2 is canceled.

Claim 3 on appeal is rejected.

Claim 4 on appeal is rejected.

Claim 5 on appeal is rejected.

Claim 6 on appeal is rejected.

Claim 7 on appeal is rejected.

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IV. STATUS OF AMENDMENTS

The Amendment Under 37 CFR 1.116 filed October 20, 2006 has been denied entry.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to a paper for ink jet and electrophotographic recording usable for both ink jet recording and electrophotographic recording. More particularly, it relates to a paper for ink jet and electrophotographic recording which is a recording paper of so-called plain paper type having no special coating on the recording surface, and, especially, which has excellent water resistance of images recorded thereon with a water-soluble ink by the ink jet recording method and which has excellent toner transferability and running property in color recording by the electrophotographic recording method. (Specification, pg. 1, lines 6-14).

Claim 1 on appeal recites paper for ink jet and electrophotographic recording which comprises a support having a cationic resin adhered thereto in a dry adhering amount of 0.5-2.0 g/m² and which has a surface resistivity of $1.0 \times 10^9 - 9.9 \times 10^{13} \Omega$, wherein the cationic resin has a cation equivalent of 3-8 meq/g as measured by colloidal titration method. (Specification, pg. 6, lines 4-15 and pg. 7, lines 12-16).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether or not claims 1 and 3-7 on appeal are unpatentable under 35 U.S.C. § 112, first paragraph, as containing subject matter which is not described in the specification.
2. Whether or not claims 1 and 5-7 on appeal are anticipated under 35 U.S.C. § 102(b) by U.S. Patent 4,279,961 to Fujioka et al. (hereafter, "**Fujioka et al.**").
3. Whether or not claims 3 and 4 on appeal are unpatentable under 35 U.S.C. § 103(a) over **Fujoka et al.** in view of U.S. Patent No. 4,207,142 to Shepherd (hereafter "**Shepherd**").
4. Whether or not claim 1 on appeal is unpatentable under 35 U.S.C. § 103(a) over U.S. Patent 6,335,085 to Asano et al. (hereafter, "**Asano et al.**").

VII. ARGUMENT

1. CLAIMS 1 AND 3-7 ON APPEAL CONTAIN SUBJECT MATTER WHICH IS SUFFICIENTLY DESCRIBED IN THE SPECIFICATION.

Specifically, the Examiner has asserted the following:

In claim 1, the phrase, 'present on a surface of the support' is not supported by the specification. In claim 7, the phrase, 'wherein the cationic resin is present on surfaces of both sides of the support' is not supported by the specification.

In this regard, it should be noted that pg. 15, lines 8-16 disclose that a cationic resin is adhered to support 1. Pg. 18, lines 22 to pg. 19, line 9 discloses that a cationic resin is adhered to both sides of a synthetic paper as a support.

Appellants respectfully submit that this language would suggest to one of ordinary skill in the art that such an "adherence" of the cationic resin would have to be considered being present on a surface of the support.

Thus, claims 1 and 3-7 on appeal are sufficiently supported in the specification and the 35 U.S.C. § 112, first paragraph, rejection should not be sustained.

2. CLAIMS 1 and 3-7 ON APPEAL ARE PATENTABLE OVER FUJIOKA ET AL. UNDER 35 U.S.C. §103(a).

Fujioka et al. discloses cationic resins and a surface resistivity of 10^6 to 10^{10} ohms by dry weight.

Claim 1 on appeal recites that the cationic resin is present on the surface of the support, and the recording paper has a surface resistivity of 1.0×10^9 - $9.9 \times 10^{13} \Omega$.

In contrast, the final product disclosed in Fujioka et al., which is to be compared with the present invention, is constituted of a paper substrate, an electroconductive layer and a record forming layer formed on the electroconductive layer. In Fujioka et al., a cationic resin is contained only in the electroconductive layer, and the record forming layer is mainly composed of an insulative resin. A cationic resin is not present on the surface of the recording layer. Moreover, Fujioka et al. fails to disclose or suggest that the surface resistivity of the recording side of the paper is 1.0×10^9 - $9.9 \times 10^{13} \Omega$, as claimed in the present invention. There is no motivation in Fujioka et al. to lead one of ordinary skill in the art to the present invention with the other respects.

In the Office Action of May 12, 2006, the Examiner indicated:

Applicant argues that the coating applied to the base sheet does not comprise cationic resin on the recording side of the paper. In claims 1 and 5, the limitation of "on the recording side of the paper" has been cancelled from the claim. Examiner maintains Fujioka discloses a recording material with a base sheet (abstract) where a coating is applied to the base sheet comprising cationic resins, (column 5, lines 33-44). Applicant further argues Fujioka fails to disclose a

surface resistivity of the recording side of the paper is 1.0×10^9 to 9.9×10^{13} ohms. Fujioka discloses a recording material with a base sheet (abstract) where a coating is applied to the base sheet comprising cationic resins having a surface resistivity of 10^6 to 10^{10} ohms (column 5, lines 36-42).

In response to this argument, it should be noted that claim 1 on appeal recites that a cationic resin is present on a surface of the support, which does not limit the presence of the resin to only the surface of the recording side, but permits the cationic resin to be present on both surfaces. In **Fujioka et al.**, the cationic resin is not present on either surface of the paper.

Thus, the 35 U.S.C. § 102(b) rejection of claims 1 and 5-7 on appeal should not be sustained.

3. CLAIMS 1 and 3-7 ON APPEAL ARE PATENTABLE OVER FUJIOKA ET AL. IN VIEW OF SHEPHERD UNDER 35 U.S.C. §103(a).

Shepherd has been cited for teaching paper sizing materials consisting of rosin (column 1, lines 18-20) and alkenyl succinic anhydride sizing agents (column 2, lines 45-63).

Shepherd, like Fujioka et al., fails to teach, mention or suggest the cationic resin being present on a surface of the paper, which may include the recording side.

Thus, the 35 U.S.C. § 103(a) rejection of claims 1 and 3-7 on appeal should not be sustained.

**4. CLAIMS 1 and 3-7 ON APPEAL ARE PATENTABLE OVER ASANO ET AL.
UNDER 35 U.S.C. §102(b).**

Asano et al. discloses an ink jet recording sheet including a substrate sheet impregnated or coated with a cationic compound; an ink-receiving layer formed on the cationic compound-applied substrate sheet and containing a pigment and a binder and a gloss layer formed on the ink receiving layer and containing a polymer resin produced from ethylenically unsaturated monomers.

The Examiner has urged that, although the surface resistivity and cation equivalent are not disclosed in Asano et al., they are inherent features because the cationic material is disclosed to be applied in a dry adhering amount of 0.1 to 10 g/m², which is a range which encompasses that which is recited in claim 1 of the instant application. However, because the range of 0.5 to 2.0 g/m² recited in claim 1 is narrower than that disclosed in Asano et al., the surface resistivity limitation of claim 1 might not be met when the dry adhering amount is outside the range recited in claim 1, even though it may be within the range disclosed in Asano et al. Thus, the surface resistivity and cation equivalent limitations recited in claim 1 are not inherently taught by Asano et al.

Thus, the 35 U.S.C. § 102(b) rejection of claims 1 and 3-7 on appeal should not be sustained.

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For the above reasons, The Board of Patent Appeals and Interferences is therefore respectfully requested to reverse all of the Examiner's rejection of claims 1 and 3-7 on appeal under 35 U.S.C. § 112, first paragraph; 35 U.S.C. § 102(b); and 35 U.S.C. § 103(a) and pass this application to issue.

In the event this paper is not timely filed, Appellants hereby petitions for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosure: Claims Appendix
Evidence Appendix
Related Proceedings Appendix
Check in the amount of \$500.00

VIII. CLAIMS APPENDIX

Claim 1 A paper for ink jet and electrophotographic recording which comprises a support having a cationic resin present on a surface of the support, the cationic resin adhered thereto in a dry adhering amount of 0.5-2.0 g/m² and which has a surface resistivity of 1.0×10^9 - $9.9 \times 10^{13} \Omega$, wherein the cationic resin has a cation equivalent of 3-8 meq/g as measured by colloidal titration method.

Claim 3 A paper for ink jet and electrophotographic recording according to claim 1, wherein the support has a neutral rosin sizing agent or an alkenyl succinic anhydride as an internal sizing agent.

Claim 4 A paper for ink jet and electrophotographic recording according to claim 1, wherein the support contains a waste paper pulp.

Claim 5 A paper for ink jet and electrophotographic recording according to claim 1, wherein the surface resistivity is 1.0×10^{10} - $9.9 \times 10^{13} \Omega$.

Claim 6 A paper for ink jet and electrophotographic recording according to claim 1, wherein the paper for ink jet and electrophotographic recording is made of plain paper, and the support is a paper.

Claim 7 A paper for ink jet and electrophotographic recording according to claim 1,
wherein the cationic resin is present on surfaces of both sides of the support.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.